

# THE POLITICS OF PARTICIPATION: EVALUATING STAKEHOLDER EQUITY IN CO-MANAGEMENT REGIMES

Sarah Lindley Smith\*

## Introduction

Within natural resource management, there is increasing criticism of the traditional model of top-down management as a method of governance, as researchers and managers alike have recognized that resources can frequently be better managed when stakeholders are directly involved in management. As a result, in recent years the concept of co-management of natural resources, in which management responsibilities are shared between the government and stakeholders, has become increasingly popular, both in the academic literature and in practice. However, while co-management has significant potential as a successful management tool, the issue of equity in co-management has rarely been addressed. It is necessary to understand the differential impacts on stakeholders of co-management processes and the degree to which diverse stakeholders are represented within co-management. Understanding the interests of various stakeholders can be a way to more effectively address the distributional and social impacts of coastal policies, which can in turn increase compliance with management measures and lead to more sustainable resource management regimes. This research seeks to take a closer look at the concepts of co-management and participation through a number of case studies of marine protected areas (MPAs) in the Caribbean.

## Background

Definitions vary in the literature, but in simple terms co-management can be defined as an arrangement between the government and a group or groups of stakeholders for the management of natural resources (Pomeroy et al. 2004). Rather than being a single, defined method for governing resource use, co-management can be viewed as continuum, from government-centralized management to community self-governance (Pomeroy et al. 2004). Co-management has the potential to encourage more effective management of natural resources by incorporating the interests of local stakeholders, yet there are numerous potential pitfalls in the process of community involvement. Often a co-management arrangement is designed assuming a homogeneous community, which is rarely the case; within a given community there are likely to be multiple interests and actors, political forces, and power struggles (Agrawal and Gibson 1999). Stakeholders with low visibility and little power may be overlooked in this process; these same stakeholders may be the ones to whom the most attention needs to be paid to ensure an equitable outcome (Geoghegan and Renard 2002).

Participation and co-management are often spoken about concurrently, but they are not necessarily interchangeable. Participation may refer to a broad range of activities, from attending meetings where community members are informed about the management activities, to sitting on an advisory council. While co-management necessitates the participation of stakeholders in some way, in no way does it mean all stakeholders are participating in management, or that all stakeholders are represented in management. In some cases, those stakeholders who are involved in co-managing a resource may not represent the interests of the community at large, or even the majority of stakeholders.

## Methods

Six different marine protected areas (MPAs) in the wider Caribbean with some form of co-management arrangement in place, whether formal or informal, were selected as case studies. Sites were selected to maximize variation on factors such as the nature of the co-management arrangement and the perceived success of the marine protected areas. The sites included in the research were: Saba Marine Park, Saba, Netherlands Antilles; St. Eustatius National Marine Park, St. Eustatius, Netherlands Antilles; Buccoo Reef Marine Park, Tobago; Scotts Head/Soufriere Marine Reserve, Dominica; Hol Chan Marine Reserve and Laughing Bird Caye National Park, Belize. A total of 1494 surveys were conducted with individuals residing in the communities adjacent to the marine protected areas.

Respondents were asked about their knowledge of the MPA and of those individuals responsible for managing the MPA, as well as whether they believed their interests were being represented by MPA management. It is theorized that those community members who personally know the individuals involved in management have better access to decision-making and management processes, and are more likely to have their interests represented. Respondents

were also asked about their participation in management activities, whether they had ever attended a meeting or otherwise participated in MPA management, and when and with what frequency they had participated. Data were also collected on individual factors such as age, education, and years of residence within the community. Survey responses were then analyzed to evaluate stakeholder participation at each site.

## Results

Some significant results of analysis of the complete data set are presented in tables 1 and 2.

| <b>Occupation</b> | <i>Participated<br/>(attended<br/>meeting)</i> | <i>Can identify<br/>someone involved<br/>in management</i> | <i>Believes interests<br/>are represented<br/>by management</i> |
|-------------------|--|--|---|
| <i>Fisherman</i>  | YES, $\chi=23.272$<br>Sig <0.001               | YES, $\chi=7.387$<br>Sig <0.01                             | NO, $\chi=8.523$<br>Sig <0.01                                   |
| <i>Tour Guide</i> | YES, $\chi=103.184$<br>Sig <0.001              | YES, $\chi=28.329$<br>Sig <0.001                           | YES, $\chi=19.283$<br>Sig <0.001                                |
| <i>Tourism</i>    | YES, $\chi=27.159$<br>Sig <0.001               | YES, $\chi=2.843$<br>Sig <0.1                              | YES, $\chi=22.772$<br>Sig <0.001                                |

**Table 1. Analysis of survey responses by occupation** (Chi-squared analysis)

Table 1 presents analysis of the responses to three survey questions (Have you ever attended a meeting about the MPA?; Do you know anyone involved in management?; Do you believe your interests are represented by those involved in management?), analyzed by selected occupations, including fishermen, tour guides, and individuals involved in tourism-related businesses such as hotels and restaurants. These three occupation groups were determined to have the greatest interests in the MPAs, and are all identified as important stakeholders at each of the MPAs included in the study. All of the MPAs in the study have both a tourism industry and a fishing industry based within or nearby the MPA, although the relative importance of these two industries varies by site. Fishing and tourism interests are frequently at odds in many of the MPAs, and in situations where the MPA was created in order to promote tourism activities, fishermen have often been disenfranchised in the process.

The results found that members of each of the three groups were statistically more likely to have attended a meeting or to be able to correctly identify someone in management than the group of respondents as a whole. In some cases these differences were drastic; for example, 51.9% of tour guides and 38.4% of fishermen had attended meetings as opposed to 15.3% of the rest of the populations surveyed. Tour guides and others employed in tourism were significantly much more likely to believe their interests were being represented by those responsible for managing the MPA than the rest of the survey population. Fishermen, however, were statistically more likely to say their interests were not being represented; 41.2% of fishermen believed their interests were represented by management, as opposed to 46.1% of the rest of the population.

| <b>Socioeconomic<br/>variables</b>         | <i>Heard of MPA</i>                                | <i>Been to meeting</i>                            | <i>Can name someone<br/>involved in MPA</i>         |
|--|--|---|---|
| <i>Gender (Chi-<br/>squared)</i>           | MALE, $\chi=10.704$<br>Sig <0.01                   | MALE,<br>$\chi=26.524$<br>Sig <0.001              | Not significant<br>Sig =.712                        |
| <i>Age (t-test)</i>                        | Not significant<br>t=.097, sig=.923                | meanNO=37.0,<br>meanYES=39.6<br>t=-2.675, sig<.01 | meanNO=36.7,<br>meanYES=38.3<br>t=-2.017, sig. <.05 |
| <i>Years of<br/>Education<br/>(t-test)</i> | meanNO=10.3,<br>meanYES=12.0<br>t=-5.271, sig<.001 | Not significant<br>t=-1.728,<br>sig=.084          | meanNO=11.8,<br>meanYES=12.5<br>t=-3.034, sig<.005  |

**Table 2. Analysis of survey responses by socioeconomic factors**

Table 2 shows the responses to two of the three questions listed above, as well as “Have you ever heard of the MPA?”, analyzed by socioeconomic factors including gender, age, and years of education. Gender was found to be a significant predictor of whether the respondents had ever heard of the MPA or attended a meeting, with men more likely to have done both. Age was a predictor of both whether the respondent had attended a meeting and whether they were able to correctly name someone involved in the MPA (older respondents were more likely to do both).

|                                      | <i>Attended meeting</i> |       | <i>Can name someone involved</i> |       | <i>Believes interests are represented</i> |       |
|--------------------------------------|-------------------------|-------|----------------------------------|-------|---|-------|
|                                      | Yes                     | No    | Yes                              | No    | Yes                                       | No    |
| Buccoo Reef Marine Park              | 13.2%                   | 86.8% | 28.3%                            | 71.7% | 41.9%                                     | 58.1% |
| Hol Chan Marine Reserve              | 16.6%                   | 83.4% | 36.3%                            | 63.8% | 64.6%                                     | 35.4% |
| Laughing Bird Caye Nat. Park         | 25.2%                   | 74.8% | 48.7%                            | 51.3% | 54.9%                                     | 45.1% |
| Saba Marine Park                     | 26.9%                   | 73.1% | 66.4%                            | 33.6% | n/a                                       | n/a   |
| St. Eustatius Nat. Marine Park       | 15.5%                   | 84.5% | 60.4%                            | 39.1% | n/a                                       | n/a   |
| Scotts Head/Soufriere Marine Reserve | 14.3%                   | 85.7% | 65.7%                            | 34.3% | 37.0%                                     | 63.0% |

**Table 3. Participation data by MPA**

Table 3 shows some of the data on participation for each MPA. The MPAs with the highest rates of participation were the Saba National Marine Park and the Laughing Bird Caye National Marine Park, while the lowest participation rates were at the Buccoo Reef Marine Park and the Scotts Head/Soufriere Marine Reserve. The residents in the communities adjacent to these two MPAs also had the fewest respondents indicated they believe their interests were being represented by those responsible for management of the MPA. Both the Saba Marine Park and the Laughing Bird Caye National Park are co-managed by local NGOs with boards of directors made up of a diverse selection of stakeholders from the local community. In both cases, the NGOs are very active in the local community, conducting outreach programs related to the MPA, and in both cases the communities where the MPAs are located are small. The Buccoo Reef Marine Park is co-managed primarily by representatives drawn from government agencies, few of whom are engaged directly with the local communities. The Scotts Head/Soufriere Marine Reserve is also has a co-managing body made up of representatives from the local community; however, the group is not very active, and there are few management activities in which stakeholders can participate.

## Discussion

At all of the MPAs included in the study, fishermen and tourism stakeholders have been involved in the co-management process through attending meetings, serving on boards, and participating in other management activities. The co-management arrangements have been successful in involving these stakeholder groups in some capacity; however, this does not necessarily mean these stakeholders are able to influence the process. While tour guides and others involved in tourism for the most part believed their interests were represented, the majority of fishermen did not feel their interests were being represented in the process. Participation does not necessarily translate to the ability to direct the outcome of management. Another result of this analysis is that women are less likely to be aware of the MPA or to have attended meetings than men; women may represent an important stakeholder group being excluded from the process.

By analyzing data on participation for each MPA, it becomes apparent that the greater the diversity of stakeholders involved in the co-management process and the more active the management bodies are within the local community, the more likely individuals are to attend meetings or be otherwise engaged in the MPA. Engagement in the MPA leads stakeholders to feel their interests are represented by the process. This research points to the conclusion that

not all co-management arrangements are created equal; different stakeholder groups must be identified and engaged in order to ensure equitable management.

## References

Agrawal, A.; Gibson, C.C. 1999. Enchantment and disenchantment: the role of community in natural resource conservation. *World Development*, 27 (4). 629-649.

Geoghegan, T.; Renard, Y. 2002. Beyond community involvement: lessons from the insular Caribbean. *Parks*, 12 (2). 16-25.

Pomeroy, R.S.; McConney, P.; Mahon, R. 2004. Comparative analysis of coastal resource co-management in the Caribbean. *Ocean and Coastal Management*, 47. 429-447.

Sarah Lindley Smith  
University of Rhode Island  
Department of Marine Affairs  
Kingston, RI 02881  
Ph (617) 817-7888  
ssmith29@mail.uri.edu